

REMARKS

In the April 11, 2006 Office Action, claims 1, 2 and 4-11 were rejected. This Response amends claims 1 and 4, and introduces new claims 21 and 22. No new matter has been introduced. After entry of the foregoing amendments, claims 1, 2, 4-11, 21, and 22 (12 total claims; 3 independent claims; no additional claim fees due) remain pending in the application. Reconsideration of the application is respectfully requested in view of the above amendments and the following remarks.

§102 Rejection

Claims 1, 2, and 8-10 stand rejected under 35 U.S.C. §102(e) as being anticipated by Comtesse, USPA 2003/0196544 (“Comtesse”). Applicant respectfully traverses this rejection.

Comtesse (see FIGS. 1-3) discloses a separation device 10 for temporarily attaching a first element 12 to a second element 14. The separation device 10 resembles a hook, and its lower end is attached to the first element 12 using a fastener. The upper end of the separation device 10 forms an inverted “L” that engages with an L-shaped lower end of the second element 14. The mating of these two L-shaped features is depicted in FIG. 2 of Comtesse. The first element 12 includes a space 20 for an expansion tube 16. Notably, a flat wall of the separation device 10 serves as a retaining wall for the expansion tube 16 (see FIG. 1 and FIG. 2 of Comtesse). Upon detonation, the expansion tube 16 forces the separation device 10 away from the first element 12, thus disengaging the two L-shaped features (see FIG. 3 of Comtesse).

The Office Action compares the second element 14 to the “male member” recited in Applicant’s claims, and compares the first element 12 and the separation device 10 to the “female member” recited in Applicant’s claims. The Office Action also contends that Comtesse discloses the structure and functionality of the separation joint recited in Applicant’s claims. Applicant respectfully disagrees with the conclusions reached in the Office Action and submits that Comtesse does not teach or suggest each and every element of independent claim 1 as amended.

Independent claim 1 now recites “a male member having a first side with a first major surface and a second side, opposite said first side, with a second major surface, wherein at least one projection is formed on, and extends from, each of said first and second major surfaces.” Applicant’s FIG. 8 depicts one possible embodiment having this structure. In contrast, the

second element 14 of Comtesse (i.e., the male member) does not include protrusions extending from its left side. Rather, the second element 14 has only one protrusion (the base of the L), which extends from the right side.

In addition, independent claim 1 now specifies that the split female member has symmetrical half structures. Applicant's FIG. 7 and FIG. 9 depict one possible embodiment having this arrangement. In contrast, the first element 12 and the separation device 10 of Comtesse (i.e., the female member) are asymmetrical, as clearly shown in FIGS. 1-3 of Comtesse.

Moreover, independent claim 1 now recites that at least one projection is formed on, and extends from, each of the flanges of the female member, and that the projections on the female member are configured to fit between and mate with the projections on the male member. In contrast, the first element 12 of Comtesse (i.e., one portion of the female member) does not include at least one projection that fits between and mates with projections on the second element 14 of Comtesse (i.e., the male member).

For at least the above reasons, Comtesse does not teach each and every element of amended claim 1 and, therefore, claim 1 is not anticipated by Comtesse. For the same reasons, claims 2 and 8-10 (which variously depend from claim 1) are not anticipated by Comtesse. Accordingly, Applicant requests the withdrawal of the §102 rejection of claims 1, 2, and 8-10.

§103 Rejections

Claims 4-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Comtesse in view of Khatiblou et al., USPN 5,735,626 ("Khatiblou"). Applicant traverses this rejection.

Claims 4-7 all variously depend from claim 1. For the reasons discussed above, Comtesse fails to teach or suggest several elements of claim 1. Furthermore, Khatiblou fails to compensate for the shortcomings of Comtesse.

Khatiblou discloses the use of a "buckle" type of fastening joint that clips together and is held together using "doublers" (reference number 62) that are sized and configured to lock the two components of the buckle together. The stiffness of the doublers determines the amount of force needed to separate the two sides of the buckle (see Column 4, Lines 47-60). In other words, the prongs of Khatiblou's female member are not configured to clamp and hold the male member without any fastening mechanism holding the flanges to the male member, as recited in Applicant's claim 1. Moreover, the prongs of Khatiblou's female member are not

physically modified or deformed upon deployment of the expandable element (reference number 68). Indeed, FIG. 3 of Khatiblou clearly shows the prongs of the female member as unbent, not deformed, and not physically modified.

In addition, regarding claim 4, the Office Action acknowledges that Comtesse does not teach a clevis formed by two half structures of a female member. The Office Action contends that Khatiblou discloses such a clevis. Applicant disagrees with this characterization of Khatiblou. In particular, Khatiblou does not teach or suggest a split female member having two half structures that form a clevis. Rather, the rail segments (reference numbers 12 and 14) taught by Khatiblou are each one-piece elements; Khatiblou does not describe these rail segments as split members having two half structures.

Thus, even if the proposed combination of Comtesse and Khatiblou were made, the invention of claims 4-7 would not be obtained.

Moreover, one skilled in the art would not be motivated to modify the Comtesse structure to accommodate a clevis as recited in Applicant's claims. Indeed, there is absolutely no need for such a clevis in the Comtesse arrangement. Referring to FIG. 2 of Comtesse, the end of the first element 12 (i.e., one part of the female member) itself includes a clevis for attachment to the respective structure. This clevis is independent of the separation device 10 (i.e., the other part of the female member), and is not formed by the coupling of two half structures. Thus, the proposed modification to Comtesse would be unnecessary, undesirable, and impractical.

For at least the above reasons, claims 4-7 are not unpatentable over Comtesse in view of Khatiblou, and Applicant requests the withdrawal of the §103 rejection of those claims.

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Comtesse in view of Repe et al., USPN 4,879,941 ("Repe"). Applicant traverses this rejection.

Claim 11 depends from claim 1. For the reasons discussed above, Comtesse fails to teach or suggest several elements of claim 1. Regarding claim 11, the Office Action cites Repe for its teaching of a deformable metal. Repe, however, fails to compensate for the shortcomings of Comtesse. Thus, even if the proposed combination of Comtesse and Repe were made, the invention of claim 11 would not be obtained.

For at least the above reasons, claim 11 is not unpatentable over Comtesse in view of Repe, and Applicant requests the withdrawal of the §103 rejection of claim 11.

New Claims

Most of the above discussion of amended claim 1 also applies to new independent claims 21 and 22. In addition, claims 21 and 22 each recite a male member having first and second opposing sides and a plurality of protrusions on each side. The prior art cited in the Office Action does not teach or suggest this limitation.

Claim 21 also recites a split female member having a first and second half structures, where:

the first half structure having a first flange and a plurality of first flange protrusions formed on and extending from the first flange, the second half structure having a second flange and a plurality of second flange protrusions formed on and extending from the second flange, the first flange opposing the second flange, and the first flange protrusions and the second flange protrusions extending toward one another, wherein the plurality of first protrusions are configured to fit between and mate with the plurality of first flange protrusions, the plurality of second protrusions are configured to fit between and mate with the plurality of second flange protrusions, the plurality of first flange protrusions are configured to fit between and mate with the plurality of first protrusions, and the plurality of second flange protrusions are configured to fit between and mate with the plurality of second protrusions

The prior art cited in the Office Action does not teach or suggest these limitations.

Claim 22 also recites a split female member having a first and second half structures, where:

the first half structure having a first flange and a plurality of first flange protrusions formed on and extending from the first flange, the second half structure having a second flange and a plurality of second flange protrusions formed on and extending from the second flange, the first flange opposing the second flange, and the first flange protrusions and the second flange protrusions extending toward one another, wherein each of the plurality of first protrusions and each of the plurality of second protrusions includes a flat upper surface and an angled lower surface opposite the flat upper surface, each of the plurality of first flange protrusions and each of the plurality of second flange protrusions

includes an angled upper surface and a flat lower surface opposite the angled upper surface, the flat upper surfaces mate with the flat lower surfaces and the angled upper surfaces mate with the angled lower surfaces when the first half structure and the second half structure are placed together around the male member

The prior art cited in the Office Action does not teach or suggest these limitations.

Furthermore, each of new claims 21 and 22 recites that:

the first half structure comprising a first cavity formed therein, and the second half structure comprising a second cavity formed therein, the first cavity and the second cavity forming a cavity for the female member when the first half structure and the second half structure are placed together

The prior art cited in the Office Action does not teach or suggest these limitations. In particular, the separation device 10 of Comtesse does not include a cavity formed therein. Rather, the separation device 10 merely serves as a flat retaining wall for the space 20.

Therefore, for at least the above reasons, new claims 21 and 22 are also allowable.

Conclusion

In conclusion, for the reasons given above, all claims now presently in the application are believed allowable and such allowance is respectfully requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the undersigned attorney at (480) 385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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